

IN THE CLAIMS:

1. (Currently Amended) A gelled anode mixture comprising a metal alloy powder, a gelling agent, an alkaline electrolyte, and a surfactant having the general formula $Y SO_x^-$ in an amount sufficient to reduce gassing and maintain performance relative to an anode lacking the surfactant, wherein x is 3 or 4, and wherein Y is selected from the group consisting of an alkyl group, an aryl group, an alkylaryl group, a carboxy acid group, and a salt of any of the foregoing.

2. (Cancelled)

3. (Original) A gelled anode mixture as claimed in Claim 1 wherein the surfactant is a salt of a sulfated octadecanoic acid.

4. (Original) A gelled anode mixture as claimed in Claim 1 wherein the surfactant is a sodium salt of sulfated oleic acid.

5. (Currently Amended) A gelled anode mixture as claimed in Claim 1 wherein the surfactant is selected from the group consisting of surfactants sold under the trademarks Witconate™ 1840X, Dyasulf 2031, Dymosol 2031, Freedom SOA-70, and Freedom SOA-70WV.

6. (Original) A gelled anode mixture as claimed in Claim 1 further comprising an organic phosphate ester surfactant.

7. (Currently Amended) A gelled anode mixture as claimed in Claim 6 wherein the organic phosphate ester surfactant is an ethylene oxide-adduct ~~type~~ organic phosphate ester.

8. (Currently Amended) A gelled anode mixture as claimed in Claim 6 wherein the organic phosphate ester surfactant is sold under the trademark RM-510.

9. (Cancelled)

10. (Currently Amended) A gelled anode mixture as claimed in Claim 9 1 wherein the surfactant ~~of Claim 1~~ is a salt of a sulfated octadecanoic acid.

11. (Currently Amended) A gelled anode mixture as claimed in Claim 9 1 wherein the surfactant ~~of Claim 1~~ is a sodium salt of sulfated oleic acid.

12. (Currently Amended) A gelled anode mixture as claimed in Claim 9 1 wherein the surfactant ~~of Claim 1~~ is selected from the group consisting of surfactants sold under the trademarks Witconate™ 1840X, Dyasulf 2031, Dymosol 2031, Freedom SOA-70, and Freedom SOA-70WV.

13. (Currently Amended) A gelled anode mixture as claimed in Claim 12 wherein the organic phosphate ester surfactant is an ethylene oxide-adduct ~~type~~ organic phosphate ester.

14. (Currently Amended) A gelled anode mixture as claimed in Claim 13 wherein the organic phosphate ester surfactant is sold under the trademark RM-510.

15. (Currently Amended) A gelled anode mixture comprising a an alloyed zinc powder, a gelling agent, an alkaline electrolyte, a sodium salt of sulfated oleic acid and an ethylene oxide-adduct ~~type~~ organic phosphate ester.

16. (Currently Amended) A gelled anode mixture as claimed in Claim 15 wherein the sulfated oleic acid is selected from the group consisting of surfactants sold under the trademarks Witconate™ 1840X, Dyasulf 2031, Dymosol 2031, Freedom SOA-70, and Freedom SOA-70WV, and the organic phosphate ester is RM-510.

17. (Currently Amended) An alkaline electrochemical cell comprising:
a positive current collector;
a cathode in contact with the positive current collector;
a gelled anode comprising a alloyed zinc powder, a gelling agent, an alkaline electrolyte, and a surfactant having the general formula $Y SO_x^-$ in an amount sufficient to reduce gassing and maintain performance relative to a cell lacking the surfactant, wherein x is 3 or 4, and wherein Y is selected from the group consisting of an alkyl group, an aryl group, an alkylaryl group, a carboxy acid group, and a salt of any of the foregoing;
a separator between the cathode and the anode; and
a negative current collector in electrical contact with the anode.

18. (Cancelled)

19. (Currently Amended) A ~~An~~ alkaline electrochemical cell as claimed in Claim 17 wherein the surfactant is a salt of a sulfated octadecanoic acid.

20. (Currently Amended) A ~~An~~ alkaline electrochemical cell as claimed in Claim 17 wherein the surfactant is a sodium salt of sulfated oleic acid.

21. (Currently Amended) A ~~An~~ alkaline electrochemical cell as claimed in Claim 17 wherein the surfactant is selected from the group consisting of surfactants sold under the trademarks Witconate™ 1840X, Dyasulf 2031, Dymosol 2031, Freedom SOA-70, and Freedom SOA-70WV.

22. (Currently Amended) A ~~An~~ alkaline electrochemical cell as claimed in Claim 17 further comprising an organic phosphate ester surfactant.

23. (Currently Amended) A ~~An~~ alkaline electrochemical cell as claimed in Claim 22 wherein the organic phosphate ester surfactant is an ethylene oxide-adduct ~~type~~ organic phosphate ester.

24. (Currently Amended) A ~~An~~ alkaline electrochemical cell as claimed in Claim 22 wherein the organic phosphate ester surfactant is sold under the trademark RM-510.

25. (Cancelled)

26. (Currently Amended) A An alkaline electrochemical cell as claimed in Claim 25 ~~17~~ wherein the surfactant of ~~Claim 17~~ is a salt of a sulfated octadecanoic acid.

27. (Currently Amended) A An alkaline electrochemical cell as claimed in Claim 25 ~~17~~ wherein the surfactant of ~~Claim 17~~ is a sodium salt of sulfated oleic acid.

28. (Currently Amended) A An alkaline electrochemical cell as claimed in Claim 25 ~~17~~ wherein the surfactant of ~~Claim 17~~ is selected from the group consisting of surfactants sold under the trademarks Witconate™ 1840X, Dyasulf 2031, Dymosol 2031, Freedom SOA-70, and Freedom SOA-70WV.

29. (Currently Amended) A An alkaline electrochemical cell as claimed in Claim 28 wherein the organic phosphate ester surfactant is an ethylene oxide-adduct ~~type~~ organic phosphate ester.

30. (Currently Amended) A An alkaline electrochemical cell as claimed in Claim 29 wherein the organic phosphate ester surfactant is sold under the trademark RM-510.

31. (Currently Amended) A An alkaline electrochemical cell comprising an alloyed zinc powder, a gelling agent, an alkaline electrolyte, a sodium salt of sulfated oleic acid and an ethylene oxide-adduct ~~type~~ organic phosphate ester.

32. (Currently Amended) A An alkaline electrochemical cell as claimed in Claim 31 wherein the sulfated oleic acid is selected from the group consisting of surfactants sold under the trademarks Witconate™ 1840X, Dyasulf 2031, Dymosol 2031, Freedom SOA-70, and Freedom SOA-70WV and the organic phosphate ester surfactant is RM-510.

33. (New) A method for reducing gassing and maintaining cell performance in an alkaline electrochemical cell, the steps comprising:

providing a positive current collector;

placing a cathode in contact with the positive current collector;

providing a gelled anode comprising a alloyed zinc powder, a gelling agent, an alkaline electrolyte, and a surfactant having the general formula $Y SO_x^-$ in an amount sufficient to reduce gassing and maintain performance relative to a cell lacking the surfactant, wherein x is 3 or 4, and wherein Y is selected from the group consisting of an alkyl group, an aryl group, an alkylaryl group, a carboxy acid group, and a salt of any of the foregoing;

placing a separator between the cathode and the anode; and

placing a negative current collector in electrical contact with the anode.

34. (New) The method as recited in claim 33, wherein the surfactant is a salt of a sulfated octadecanoic acid.

35. (New) The method as recited in claim 33, wherein the surfactant is a sodium salt of sulfated oleic acid.

36. (New) The method as recited in claim 33, wherein the surfactant is selected from the group of surfactants sold under the trademarks consisting of Witconate™ 1840X, Dyasulf 2031, Dymosol 2031, Freedom SOA-70, and Freedom SOA-70WV.

37. (New) The method as recited in claim 33, further comprising the step of providing an organic phosphate ester surfactant.

38. (New) The method as recited in claim 37, wherein the organic phosphate ester surfactant is an ethylene oxide-adduct organic phosphate ester.

39. (New) The method as recited in claim 37, wherein the organic phosphate ester surfactant is sold under the trademark RM-510.

40. (New) The method as recited in claim 33, wherein the surfactant is a salt of a sulfated octadecanoic acid.

41. (New) The method as recited in claim 33, wherein the surfactant is a sodium salt of sulfated oleic acid.

42. (New) The method as recited in claim 33, wherein the surfactant is selected from the group consisting of surfactants sold under the trademarks Witconate™ 1840X, Dyasulf 2031, Dymosol 2031, Freedom SOA-70, and Freedom SOA-70WV.

43. (New) The method as recited in claim 42, wherein the organic phosphate ester surfactant is an ethylene oxide-adduct organic phosphate ester.

44. (New) The method as recited in claim 43, wherein the organic phosphate ester surfactant is sold under the trademark RM-510.